

Am 34/
10

add fi
Sub B1
CLAIMS:

1. Firescale resistant, work hardenable jewellery silver alloy compositions comprising:-

0.5 - 6% by weight copper;

0.02 - 7% by weight of a firescale resisting additive selected from one or a mixture of zinc and silicon, and

0.01 - 2.5% by weight germanium.

2. Firescale resistant, work hardenable ^{jewelry}~~jewellery~~ silver alloy compositions in accordance with Claim 1, including silver in a content of at least 92.5% by weight.

3. Firescale resistant, work hardenable ^{jewelry}~~jewellery~~ silver alloy compositions in accordance with Claim 1, including a copper content in the range of from 2.0 to 3.0% by weight.

4. Firescale resistant, work hardenable ^{jewelry}~~jewellery~~ silver alloy compositions in accordance with Claim 1, including a zinc content between 2.0 and 4.0% by weight.

5. Firescale resistant, work hardenable jewellery silver alloy compositions in accordance with Claim 1, including a silicon content in the range of 0.15 to 0.2% by weight.

6. Firescale resistant, work hardenable ^{jewelry}~~jewellery~~ silver alloy compositions in accordance with Claim 1, including a germanium content in the range of 0.04 to 2.0% by weight.

7. Firescale resistant, work hardenable jewellery silver alloy compositions comprising 0.0 to 3.5% by weight of a grain refinement and/or surface tension reducing additive selected from one or a mixture of indium and boron alloyed to a composition in accordance with ^{claim 1}~~any one of claims 1 to 6~~.

8. Firescale resistant, work hardenable jewellery silver alloy compositions in accordance with Claim 7, wherein said

Am 34
11

grain refinement and/or surface tension reducing additive comprises from 0 to 2% by weight boron and 0 to 1.5% by weight indium.

Sub
B37

A

9. Firescale resistant, work hardenable jewellery silver alloy compositions comprising tin in an amount of up to 6% by weight alloyed to a composition in accordance with ^{claim 1} ~~any one of claims 1 to 6.~~

B

Sub
Dy

10. Firescale resistant, work hardenable ^{jewelry} ~~jewellery~~ silver alloy compositions in accordance with Claim 9, wherein the tin is utilized in an amount of from 0.25 to 6% by weight.

11. Silver alloy compositions comprising:-

- 81 - 99.409% by weight silver;
- 0.5 - 6% by weight copper;
- 0.05 - 5% by weight zinc;
- 0.02 - 2% by weight silicon;
- 0.001 - 2% by weight boron;
- 0.01 - 1.5% by weight indium, and
- 0.01 - 2.5% by weight germanium.

12. Silver alloy compositions comprising:-

- 75 - 99.159% by weight silver;
- 0.5 - 6% by weight copper;
- 0.05 - 5% by weight zinc;
- 0.02 - 2% by weight silicon;
- 0.001 - 2% by weight boron;
- 0.01 - 1.5% by weight indium;
- 0.01 - 2.5% by weight germanium, and
- 0.25 - 6.0% by weight tin.

13. A method of producing firescale resistant, work hardenable jewellery silver alloy compositions according to ^{claim 1} ~~any one of Claims 1 to 10~~ and including the alloying of silver metal with a master alloy comprising, by weight:

Sub
B37/A

Art 34
12

52.5 - 99.85% by weight copper;
0.1 - 35% by weight of zinc or silicon or mixtures thereof, and
0.05 - 12.5% by weight germanium.

14. A method of producing firescale resistant, work hardenable jewellery silver alloy compositions according to Claim 7 and including the alloying of silver metal with a master alloy comprising, by weight:

15.0 - 99.545% by weight copper;
0.25 - 25% by weight zinc;
0.1 - 10% by weight silicon;
0.005 - 10% by weight boron;
0.05 - 15% by weight indium, and
0.05 - 25% by weight germanium.

15. A method of producing firescale resistant, work hardenable jewellery silver alloy compositions according to Claim 9 and including the alloying of silver metal with a master alloy comprising, by weight:

2.5 - 97.455% by weight copper;
0.25 - 25% by weight zinc;
0.1 - 10% by weight silicon;
0.005 - 10% by weight boron;
0.05 - 15% by weight indium;
0.05 - 25% by weight germanium, and
2.0 - 12.5% by weight tin.

16. A method of producing firescale resistant, work hardenable jewellery silver alloy compositions according to Claim 9 and including the alloying of silver metal with a master alloy comprising, by weight:

2.5 - 97.455% by weight copper;
0.25 - 19.85% by weight zinc;
0.1 - 7.94% by weight silicon;
0.005 - 7.94% by weight boron;

Ap 34
18

0.05 - 11.92% by weight indium;
0.05 - 19.85% by weight germanium, and
2.0 - 30% by weight tin.

17. A silver composition comprising, by weight percent:

Silver 92.5
Copper 2.35
Zinc 2.82
Silicon 0.19
Boron 0.01
Indium 0.23
Germanium 1.9

18. A silver composition comprising, by weight percent:

Silver 92.5
Copper 3.25
Zinc 3.75
Silicon 0.2
Boron 0.01
Indium 0.25
Germanium 0.04

19. A silver composition comprising, by weight percent:

Silver 92.5
Copper 3.0
Zinc 3.14
Silicon 0.15
Boron 0.01
Indium 0.2
Germanium 1.0

20. A silver composition comprising, by weight percent:

Zinc 2.25
Indium 0.075
Tin 0.075
Germanium 0.125

sub
5417

ada B57